

WHAT IS CLAIMED IS:

1. An integrated turbogenerator system, comprising:
 - a turbine;
 - a compressor rotationally coupled to the turbine for rotating therewith to generate compressed air;
 - a combustor fluidly coupled to the compressor for combusting fuel and the compressed air therein to generate exhaust gas to drive the turbine;
 - a generator rotationally coupled to the turbine for rotating therewith to generate electric power; and
 - an electrically resistive device connected to the generator to selectively dissipate a portion of the generated power.
2. The system of claim 1, wherein the compressor comprises:
 - an air intake disposed in a preselected relationship to the resistive device to channel air over the resistive device and into the compressor.
3. The system of claim 2, wherein the resistive device comprises:

an electrically resistive device connected to the generator to selectively dissipate a portion of the generated power as thermal energy in the air channeled into the compressor.

4. The system of claim 1, further comprising:

a controller connected to the generator and to the resistive device to selectively supply a portion of the generated power from the generator to the resistive device.

5. The system of claim 4, wherein the generator supplies the generated power to a load, and wherein the controller selectively supplies a portion of the generated power from the generator to the resistive device in accordance with variations in the load.

6. The system of claim 5, wherein the controller controls the speed of the turbine in accordance with variations in the load.

7. The system of claim 6, wherein the controller controls the speed of the turbine in accordance with a temperature of the resistive device.

8. The system of claim 7, wherein the controller controls the speed of the turbine to maintain a temperature of the resistive device below a preselected value.

9. The system of claim 7, wherein the controller reduces the speed of the turbine in response to a reduction in the load and supplies at least a portion of any generated power in excess of the load to the resistive device, the turbine speed being reduced at a rate selected to maintain a temperature of the resistive device below a preselected value.

10. The system of claim 3, further comprising:

a controller connected to the generator and to the resistive device to selectively supply a portion of the generated power from the generator to the resistive device.

11. The system of claim 10, wherein the generator supplies the generated power to a load, and wherein the controller selectively supplies a portion of the generated

power from the generator to the resistive device in accordance with variations in the load.

12. The system of claim 11, wherein the controller controls the speed of the turbine in accordance with variations in the load.

13. The system of claim 12, wherein the controller controls the speed of the turbine in accordance with a temperature of the resistive device.

14. The system of claim 13, wherein the controller controls the speed of the turbine to maintain a temperature of the resistive device below a preselected value.

15. The system of claim 13, wherein the controller reduces the speed of the turbine in response to a reduction in the load and supplies at least a portion of any generated power in excess of the load to the resistive device, the turbine speed being reduced at a rate selected to maintain a temperature of the resistive device below a preselected value.

16. The system of claim 7, wherein the compressor comprises:

an air intake disposed in a preselected relationship to the resistive device to channel air over the resistive device and into the compressor.

17. The system of claim 16, wherein the resistive device comprises:

an electrically resistive device connected to the generator to selectively dissipate a portion of the generated power as thermal energy in the air channeled into the compressor.

Patent Office